

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

Based on the analysis discussed in previous chapters, especially in Chapter 5, this part will conclude the major findings that are prevalent and significant. This will also examine the thread of the general perceptions of the respondents that underlying future practices of knowledge management in those SMEs. In addition, some implementation experiences and common characteristics shared by the eight companies that have been implementing knowledge management could be helpful in structuring the final working framework. Some published models of implementing knowledge management will be given a brief review, before a rudimentary knowledge management framework is proposed to Malaysian SMEs.

6.2 Major Findings

These major findings will primarily focus on (i) the perception of knowledge management and (ii) the current practices of knowledge management of Malaysian outstanding SMEs. Figure 6-1 depicts the major findings in radial manner.

6.2.1 On Perceptions of Knowledge Management

Twenty-six respondents perceive knowledge management and its related concepts largely based on their managerial responsibility, experience, position and individual interest on this survey. As a result, their very personal views may seem divergent on certain issues, but not less converge in some questions that achieve consensus.

6.2.1.1 Knowledge management is well recognised

Apparently through their ways of responding the general perception of knowledge management, respondents show little difficulty to grasp the meaning of the multiple choices listed. Most of them acknowledge that knowledge management is about organisational knowledge, and dealing with knowledge capture and dissemination that needs the collaboration of information technology management. They also recognise soft information and, education and training are both important knowledge elements.

Most of the respondents agree that to enhance the organisational effectiveness is the most wanted benefit that knowledge management can materialise, comparing with other top benefits----gaining new opportunities ahead of competitors and improving customer retention.

The causes of cost errors or missed opportunities are, basically, all knowledge-related. These may be in the event of unavailability of knowledge, information is not interpreted, and lack of the intelligence about competitors. Even the impact of a key employee leaving the company is the lost of knowledge of best practice in specific area.

6.2.1.2 People are the prime mover is emphasized

Even though it is agreeable that employees are becoming knowledge workers, only those who hold the managerial positions are entitled to this new tag. Managers are at the central stage as the knowledge is captured at the brain power.

These types of workers have the role to capture the knowledge and possess the sole power to initiate the knowledge management programme if the organisation wants to start one.

6.2.1.3 The need of Establishing a Knowledge-Oriented Company

To manage knowledge workers effectively, it is imperative to design a supporting business processes. This will include to inject appropriate motivation aids and to review the reward system to sustain long-term involvement of employees to share their valuable knowledge. Furthermore, awareness training is needed as a basic tool to educate, persuade, and convince them the common benefits of individual development and career advancement.

6.2.2 On Practices of Knowledge Management

Regardless of a few formal knowledge management projects which are being undertaken in eight companies in this survey, 'unconscious' efforts of managing knowledge are found in the forms of face-to-face dialogue or coaching and mentoring.

6.2.2.1 Readiness of Information Technology

Current state of technological infrastructure among the respondents is basically well established. More than 96% participating companies have Email, LAN/WAN, Internet. More than half of the respondents have groupware, intranet and data warehousing and data mining software.

Moreover, the level of knowledge sharing facilitated by technology is acceptable. From the knowledge capture point of view, the presence of information technology is more concentrated at the customer information, company's own product, services and market, employee knowledge and skills. For the information of competitors and regulatory environment, traditional methods like individual memory and paper document are more prevalent as knowledge repository.

6.2.2.2 Practice of knowledge sharing

Regular sharing and dialogue are at the satisfactory level. The approach of socialization or personalisation is common in practice of exchanging knowledge and ideas among employees. Activities such as face-to-face conversation or dialogue, mentoring and coaching are most popular in facilitating knowledge sharing.

6.2.2.3 Common characteristics in knowledge management programme

By any definition, the role of CEOs in pioneering the programmed is undeniable. As the main sponsor cum pioneer for such extensive knowledge-cum-change project, he or she is the central momentum to translate plans to action.

It is obvious that five companies are auditing their organisational knowledge assets and system in this survey. As a major concern, knowledge management training awareness is being conducted in all eight companies. Yet, as a bit of contrary, only two companies are developing and measuring intellectual capital while the other six will enter this phrase within one year or less.

In terms of functional sources for knowledge management, the sales and marketing, and customer service are the main players. This may due to the lack to competitive intelligence among the companies that have adversely affected their market share.

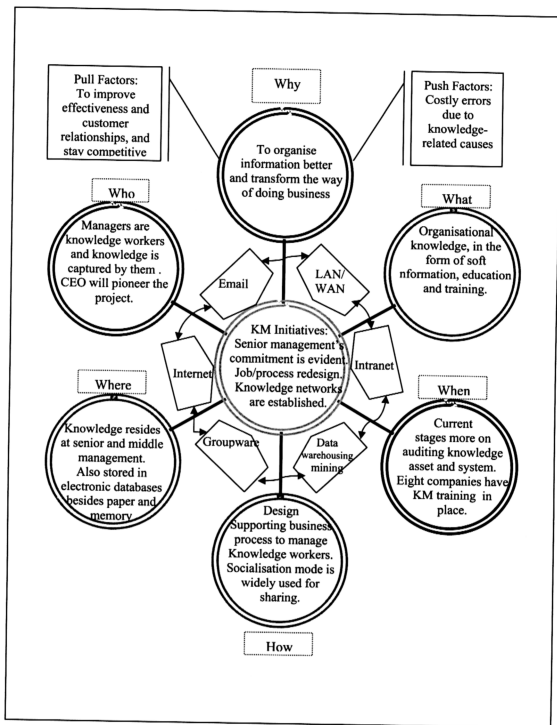


Figure 6-1 Major Findings of Perceptions and Practices on Knowledge Management

In order to effectively summarise the major findings, the method of 5W1H (What, Why, Who, Where, When and How) is used to categorise various questions in the survey (See Table 6-1)

Table 6-1 Summary of Major Findings

What
<p>Knowledge management is</p> <ul style="list-style-type: none"> <i>Organizational knowledge</i> <i>Knowledge capture and dissemination</i> <i>Information technology management</i> <p>Elements of knowledge</p> <ul style="list-style-type: none"> <i>Soft information</i> <i>Education and training</i> <p>Focus of knowledge management</p> <ul style="list-style-type: none"> <i>Capturing and sharing knowledge</i> <i>Helping growth and learning</i> <p>Organisational perception</p> <ul style="list-style-type: none"> <i>It could help our company organizes information sources better</i> <i>It is transforming the way our organization doing business</i> <p>Technology Driver</p> <ul style="list-style-type: none"> <i>People are the starting point</i> <p>Barriers of knowledge sharing</p> <ul style="list-style-type: none"> <i>Willingness to share knowledge but do not have the time/platform</i> <i>Lack of understanding of KM benefits among employees</i> <i>No reward for knowledge sharing</i> <p>Barriers of implementing knowledge management</p> <ul style="list-style-type: none"> <i>KM-related roles and responsibilities of employees</i> <i>Hard to motivate employee to share knowledge</i>
Why
<p>Knowledge management</p> <ul style="list-style-type: none"> <i>Increased organizational effectiveness</i> <i>Gained new opportunities ahead of competitors</i> <i>Improved customer retention (Enhanced client/customer relationships)</i> <p>Knowledge management, if key employee leaves</p> <ul style="list-style-type: none"> <i>Lost knowledge of best practice in specific area</i>

Table 6-1 (continued)

Sources of costly errors or missed opportunities

Knowledge not available

Data not interpreted/Inability to use information

Lack of competitor information

Who

Knowledge workers

Yes, employees are becoming knowledge workers, and there are mainly managers

Knowledge captured by

Senior management and each individual involved

Knowledge management is pioneered by

Primarily CEO with the commitment of senior management.

Where

Knowledge captured in

Senior management and middle management

Information is mainly stored in

Electronic databases for customer information, company's own product, services and market, employee knowledge and skills

Individual memory and paper document for competitors and regulatory environment.

When

Current stages of 10-Step KM initiative

Five companies are focusing on auditing knowledge assets

The most initiatives in place

Knowledge management training and awareness

Job and process redesign

How

To manage knowledge workers

Design supporting business process

Knowledge Sharing and Dialogue are facilitated regularly through

Face to face, Mentoring and coaching (Socialisation approach)

Existing technological infrastructure

More than 96% participating companies have Email, LAN/WAN, Internet.

More than half of the respondents have groupware, intranet and data warehousing and data mining software.

6.3 Recommendations on KM Model for Malaysian SMEs

A rudimentary model to implement knowledge management for Malaysian SMEs will be proposed in this sub-chapter, based on the major findings and current practices of some companies that have been systematically managing their intellectual capital. The proposed model is basically will glean the insights of some published model and theory as foundations for formulation.

6.3.1 Published Models and Frameworks Available

From the numerous knowledge management models and frameworks that have been published and accessible, only a few are selected in this brief discussion before the proposed model is shaped.

'People-Content-Technology' Models by Applehans *et al.* (1999) that depicts three key elements in knowledge management. The three key components have the characteristics as follows:

- People: The ultimate player to produce and to use the knowledge
- Content: The flow of data, information, and knowledge
- Technology: The technical infrastructure that enables the capture, storage, and delivery of content to knowledge recipients

Based on their research, McAdm and Reid (2001) summarize knowledge management models into three main categories:-

- i) Intellectual Capital models
- ii) Knowledge Category models
- iii) Socially Constructed models

The above categorisation of models indicates different emphasis in managing knowledge based on individual organisation’s culture, leadership and business and needs. In reality, however, implementation of knowledge management would be dealing with intellectual capital, knowledge transfer activities, and learning and development in the networked human relationship.

From the intelligence practice point of view, Coleman (2002) illustrates the taxonomies of knowledge as shown in Figure 6-2. He divides the intelligence practice into external and internal realms which consists of various knowledge branches. And as Coleman put it, external sources of knowledge are equally important to an organisation’s competitiveness.

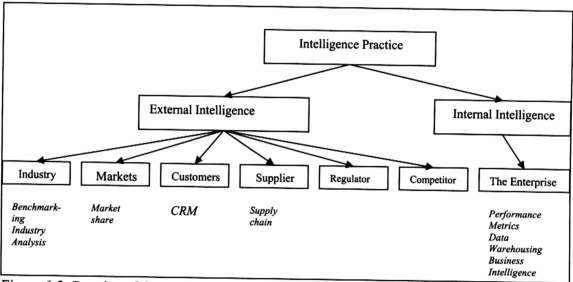


Figure 6-2: Practice of Competitive Intelligent

Source: Coleman, 2002

Figure 6-2 also highlights the accent of competitors’ information that is concluded as the lacking part in this survey.

Based on the perspective of knowledge transfer, Goh (2002) proposes a framework that examines some internal factors that may affect the process of

transferring knowledge. Figure 6-3 shows the precondition of people elements (leadership, trust and collaboration) to drive the momentum of sharing knowledge. This has to be coupled with a supporting organisational structure, capable knowledge recipient and appropriate transfer mechanism to make an effective knowledge transfer possible. The positive results of these intellectual activities are fruitful --- gaining competitive advantage in long-term.

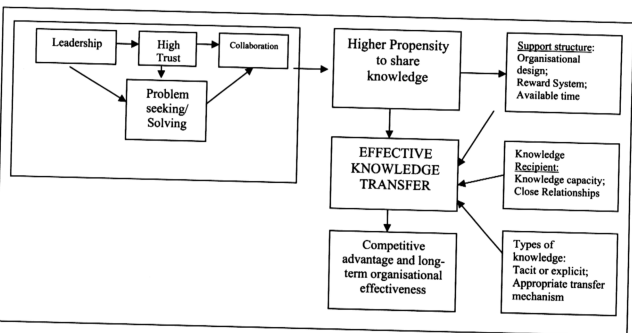


Figure 6-3 An Integrative Framework: Factors Influencing Effective Knowledge Transfer
Source: Goh, 2002

6.3.2 Some Guidelines of the Proposed Model

A combination of soft and hard skills is fundamental to balance the many parties and disciplines in knowledge management programme. As shown in Figure 6-4, the soft skills are leadership and culture which will motivate and influence the overall knowledge sharing behaviour at the first place. On the other hand, technology and

measurement will play the enabling role that enhance communication and justify returns of such project.

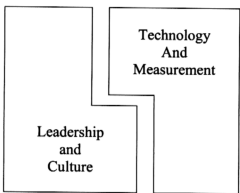


Figure 6-4 Soft and Hard Skills in KM Programme

Source: Offsey, 1997

Several criteria that set by the Most Admired Knowledge Enterprises (MAKE) (Chase, 2001) study are also taken into account as follows:-

- Success in Establishing an Enterprise Knowledge Culture (cultural issues)
- Top Management Support for Managing Knowledge (top management commitment)
- Ability to Develop and Deliver Knowledge-Based Goods/Services (alignment to business strategies)
- Success in Maximizing the Value of the Enterprise's Intellectual Capital (IC measurement)
- Effectiveness in Creating an Environment of Knowledge Sharing (cultural issues)
- Success in Establishing a Culture of Continuous Learning (learning and growth)

- Effectiveness of Managing Customer Knowledge to Increase Loyalty/Value (customer knowledge)
- Ability to Manage Knowledge to Generate Shareholder Value (value chain)

Finally, there are another set of factors that are summarised from the experience of successful knowledge project success (Davenport and Prusak, 1998a) would be useful in the course of implementing such project:-

- A knowledge-oriented culture: employees are bright, intellectually curious; staffing issue.
- A broader technical and organisational infrastructure. Multiple tools and uniform set of technology in use, and a set of roles, structures and skills that facilitating knowledge work.
- Senior management support by giving clear message and adequate funding.
- A link to economics or industry value which turns benefits to be more explicit.
- Focus on customer needs and results instead of detailed process orientation
- Applying the rules of clarity of vision and language in convey the ideas
- Deploying long-term reward and linking knowledge sharing to evaluation of compensation. Nontrivial motivational aids should be occasionally practised.
- Designing some levels of knowledge structure with the searching-oriented key terms and thesaurus

- Multiple channels for knowledge transfer are needed to encourage communication

6.3.3 Conditions of Limited Resources

Under the stress of limited resources pose to small and medium enterprises, the following conditions are applicable in conceptualising the proposed framework.

- Conditions 1: Using existing infrastructure or proprietary software (mostly Microsoft product) at initial stage without any commitment of investment in information technology
- Condition 2: Closeness of employees in SMEs, due to small geographical coverage, is to be strengthened with systematic socialization or personalisation method.
- Condition 3: Commitment and strong leadership demonstrated by the owner of the company or CEO would be decisive to initiate such programme and eventually attain objectives.

6.3.4 A Four-Stage Evolving Puzzle Model: A Knowledge Management Framework for Malaysian SMEs

This Four-Stage Evolving Puzzle Model in fact is a modified version from typical change-management oriented that believes knowledge management by its enterprise-wide scope will involves extensive managing change efforts. Figure 6-5 depicts the four stages – Prerequisite, Planning, Process and Performance – in conceptualizing a basic framework. The Process stage which is the evolving puzzles enables each knowledge activity go hand-in-hand.

6.3.4.1 Three Prerequisites

On top of the model, there are three prerequisites to be observed before starting knowledge management programmed. Firstly, to ensure the commitment of Senior Management, especially the strong leadership from CEO or the alike, is proven in action. Day and Wendler (1998) notice that in practice, successful knowledge strategies involve almost every aspect of a company's organizational design. They are therefore a matter for chief executives and senior managers.

Secondly, evaluation on the existing technological infrastructure is done because additional funding may be minimal due to limited resources. Thus, how to utilise the technology on hand is critical to save cost.

Thirdly, efforts of identifying the established informal networks and further strengthen socialisation base so that these networks will set the example to others. Even though purpose of these networks is keeping members informed, mainly via email in IT environment, they are 'in fact a rudimentary form of communities' (Tissen *et al*, 2000).

After the prerequisites are fulfilled, the strategic stage will come in. Two main things at this stage are to develop knowledge management strategy that aligned with business needs, and to appoint a cross-functional knowledge management team that comprises of key employees and to outline the knowledge management blueprint.

6.3.4.2 Planning and Strategy Alignment

In this planning phrase, we have to develop a knowledge management strategy that is aligned to business needs. This is to ensure the direction of knowledge management is in line with the future of the company.

Secondly, we have to appoint a cross-functional KM Team that consists of key

employees. To guarantee a participative environment of knowledge management, the opinion leaders are designated with important role. Equally important is to equip the team members with appropriate attitude, skills and knowledge. Basically seven requirements are emphasized here including KM awareness, strategic and business, management, thinking and learning, communication and interpersonal, information management, and IT literacy (Abell, 2001). On the awareness of knowledge management, team members ideally should be able to understand its concepts, philosophy and theory, and the best practices of other organisations. Table 6-2 summarizes the skills and attributes for KM dream team. It is believed that with those KM-related skills and attributes, the team could be driving KM project towards the right direction.

Table 6-2 KM Dream Teams

KM Dream Team – Central Enabling		KM Dream Team - Practitioners	
Skills	Attributes	Skills	Attributes
Communication	Pragmatic	Project management	Inclination for
Leadership	evangelists	Business process	implementation
KM Methodology	Persistent but	analysis	Attention to detail
Knowledge processes	humble	Interviewing	Persistent jugglers
KM tools	Organization aware	Content management	Enthusiastic
Negotiation	Connected to the top	Networking	champions
Strategic Planning	Systems view	Marketing	Natural connectors
	Intuitive	Metrics	Willing to judge and
	Risk taker	Business planning	be judge

Source: Loshin (2001)

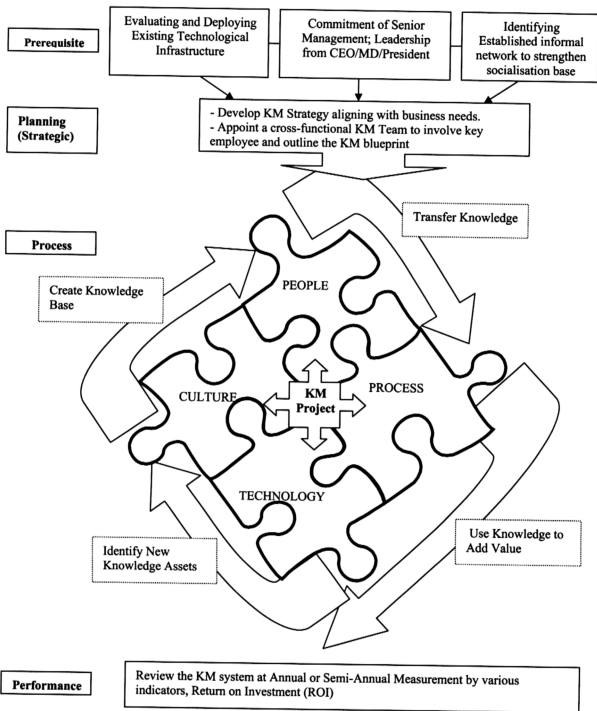


Figure 6-5 Four-Stage Evolving Puzzle Model: A Knowledge Management Framework for Malaysian SMEs

6.3.4.3 Implementation Generated by Four Puzzles

This stage involves three parts. The central force, which defuses the four puzzles, is a formal knowledge management programme. Depending on its scope covered and resources available, this initial programme could end within two years or three. Below are the suggested time frames to outline major activities.

Initial Phase One: Strategic Planning and KM Team (three to six months)

- Top management starts to strategize and position knowledge management to company's objectives and needs.
- Heads/Representatives from various departments to form a Steering Committee that is preferably chaired by the CEO or other top executive designated by him/her.
- Steering Committee will extend its role to KM team by inviting subject matter experts and opinion leaders to become members.
- Basic KM training and education are conducted to KM team's members. This may be led by external specialists if in need.
- The KM Team identifies the knowledge types critical to business performance and start to audit the knowledge assets within/out organisation.
- With sufficient understanding of the objectives, mission and knowledge assets, a KM blueprint which paths the programme details will be formulated.

Initial Phase Two: Overall Awareness and Training (three to six months)

- In-house training sessions are scheduled to all employees. KM commitment from the CEO is shown and addressed through employee gathering.
- KM Awareness weeks are organised to attract the attentions. Benefits of KM, changes of work design or reward systems are highlighted.
- KM is marketed to all stakeholders through intranet website, emails, memo, poster and other promotional materials.

Initial Phase Three: Implementation and Feedback (six months to one year)

- Trial or pilot run is started in selected departments.
- Activities of Communities of Practice (CoP) are being organised.
- In-house conference or executive forum facilitated by subject matter experts are scheduled biweekly or monthly.
- Knowledge portal in intranet environment starting the function of capturing knowledge and communicating.
- Establish an on-going feedback mechanism to review the effectiveness of programmes.

The underlying four pieces of the puzzles are people, process, technology and culture. Outskirt of the integrated puzzles group, the flow of knowledge activities include to create an appropriate knowledge base, to transfer knowledge effectively, to use knowledge for business's bottom line and to constantly identify new knowledge assets.

They are mutually complimentary and enrich each other in a puzzle manner. Missing one piece would adversely affect the programme's results. These four elements (people, culture, process and technology) are the fundamentals to generate evolving knowledge activities that surrounding them.

People Element:

Knowledge management has to mobilise the participation of all parties and virtually every employee. At the beginning, the company should hire and promote the brilliant and intellectually curious worker to create a knowledge-oriented organisation.

In knowledge management, concern on the personal characteristics of each knowledge worker and the factors that affect personal development (Carneiro, 2000) should be dealt well to attract their attention. In other words, without a focus on individual learning and an intensive co-operation, the knowledge management process cannot expect to sustain any competitive advantage from its efficiency. This will also affect the possibility of developing new knowledge (Sena and Shani, 1999).

To SMEs, the importance of communities of practice (CoP) should not be undermined as it has the power to transfer tacit knowledge within the human relationship. As Brown and Duguid (1991) observe, these informal interactions are sustained by narration, story telling, collaboration and social construction. Communities of practice, according to Genger *et al* (2002), are 'groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis'. Even though these communities are a 'natural part of organizational life', some may need intentional cultivation. Members of a CoP will share a common identity and even a sense of honour to be clustered with knowledgeable colleagues, careful seeding from corporate is

necessary such as time off for gathering, or discussion space provided in intranet, would ensure a sustainable growth of CoP.

As we have discussed earlier, the role of informal networks to promote awareness of knowledge management among employees is significant, yet merely human relationships are not equivalent to CoP. While grouping of people in organisation based on job nature or interest is common, it will result in different forms of cluster as exhibited in Table 6-3.

Table 6-3 Distinctions Between Communities of Practice and other Structures

	What's the purpose	Who belongs?	How clear are the boundaries	What holds them together?	How long do they last?
Communities of practice	To create, expand, and exchange knowledge, and to develop individual capabilities	Self-selection based on expertise or passion for a topic	Fuzzy	Passion, commitment and identification with the group and its expertise	Evolve and end organically (last as long as relevant)
Formal Departments	To deliver a product or service	Everyone who reports to the group's manager	Clear	Job requirement and common goals	Intended to be permanent (unless reorganization)
Operational Teams	To take care of an ongoing operation or process	Membership assigned by management	Clear	Shared responsibility for the operation	Intended to be ongoing (as long it is needed)
Project Teams	To accomplish a specified task	People who have a direct role in accomplishing the task	Clear	The project's goals and milestones	Predetermined ending
Communities of Interest	To be informed	Whoever is interest	Fuzzy	Access to information and sense of likemindedness	Evolve and end organically
Informal Networks	To receive and pass on information, to know who is who	Friends, colleagues and business acquaintances	Undefined	Mutual needs and relationships	Never really start or end

Adapted from Wenger *et al* (2002)

Besides, the right 'knowledge attitude' should be nurtured among employees to ensure active participation. Figure 6-6 illustrates the components covered in the

knowledge attitude. The most difficult and important is the organizational level that has to instil value of trust among workers to believe it is worth benefiting their company through knowledge sharing.

Behaviour	Learning	Sharing	Codifying
Beliefs	I am responsible for learning	My knowledge grows as it flows	My company benefits from my knowledge
Values	Self Esteem	Respect	Trust
	Individual	Team	Organization

Figure 6-6 Knowledge Attitude
Source: Tissen *et al* (2000)

Cultural Element:

Knowledge management programmes should be sensitive to the culture and ways of communication permeating a firm (Ali, 2001). In fact, the most difficult part dealing with cultural issue is the phenomena of knowledge hoarding by employees. Motivation channels through long-term reward system associated with employee performance could contribute towards knowledge friendly environment. Yet, on the contrary, Wheatley (2000) claims that people tend to share their knowledge when and where they feel comfortable like the activities of CoP.

Corporate culture is deeply-rooted since the past. It is ‘the pattern of basic assumptions, values, norms, and beliefs shared by organisation members’ (Cummings and Worley, 2001). Sharing such common ground keeps the employees knowing how to react in certain situation, how to interact with each others, and what are the criteria to evaluate individual performance.

Existing culture, however, is not necessarily conducive to knowledge management. In addition, from the information politics standpoint only the models of federalism and monarchy are instrumental (Davenport *et al*, 1992). For other models like technocratic utopianism, anarchy and feudalism could be less preferably in managing knowledge. Sometimes it may need an intervention of changing corporate culture if diagnosis of culture shows that it is not knowledge friendly.

Process Element:

Organisation setting that allows cross functional team, job rotation for employees to gain different experience, or human development policy that are facilitating knowledge activities is . Besides, the reward system to motivate employees share their knowledge has to be long-term and associated with career advancement.

Workspace design is another aspect that should not pay with less attention. To nurture a knowledge friendly environment in more tangible ways, a workspace that facilitates knowledge flow is most desirable.

The following are some popular approaches to workspace design for knowledge workers:

- Open offices to facilitate collaboration;
- Shared office arrangements encouraging or facilitating worker mobility, e.g., "hotelling," or a "network of places" by deploying wireless WANs;
- Designs that encourage informal interaction with others inside (and sometimes outside) the organization;
- The use of interesting or offbeat objects in the workplace to stimulate innovation;
- Minimizing differentials in workspace design and the provision of modular,

mobile furniture to facilitate flexibility (Davenport *et al*, 2002).

Technology Element:

As Offsey (1997) puts it, the promise of technologies aimed at knowledge management is that they will help organizations use their knowledge more efficiently without changing the tools they currently use to create and process it. For any new technologies deployed for this purpose, it has to be revolutionary changes in the way knowledge workers create, communicate and manage knowledge.

Adoption of technology for knowledge management may upgrade from time to time when the needs change and sufficient resources. Figures 6-7 depicts the phase of technological evolution that might happen over time in a KM-enabled enterprise.

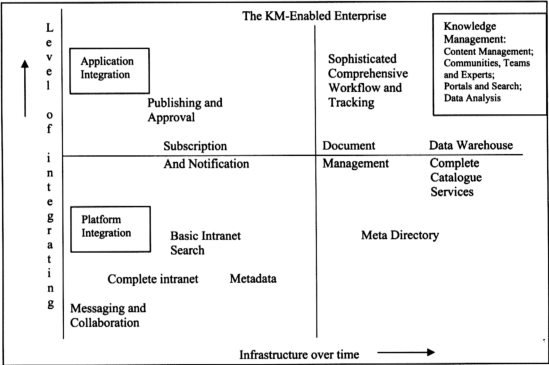


Figure 6-7 Evolutionary Technology and Knowledge Management over time
Adapted from Honeycutt (2000)

For effective knowledge management system, an intranet environment is recommended to share, retrieve and transfer knowledge. Besides functions as a repository, the intranet also useful for knowledge broker to connect knowledge seekers with knowledge sharer. Through knowledge mapping, one can navigate the competencies and experience available on specific colleagues, and approach them for further details.

For the flow of knowledge activities that are based on the four elements will be generated smoothly in a supporting environment. The flow includes:

- To create an appropriate knowledge base after auditing the employee's and organizational core competencies, the sources, users and uses of core knowledge. This also covers a systematic analysis of the content of internal document (an ISO certified organization will be better prepared for this), developing knowledge maps, corporate yellow pages.
- To transfer knowledge effectively through the sharing of best practices in experience share fairs or knowledge sharing events, or in the activities of community of practice, After Action Review (AAR), project histories, story telling and learning network. One has to bear in mind the true process of '*Transfer = Transmission + Absorption (and Use)*' (Davenport, 1998a) which entails an equal emphasis on the *Absorption* part.
- To use knowledge for business's bottom line. Knowledge management should add value to its organization and deliver positive results. Applying what knowledge available in the corporate knowledge, and adopt it into new scenario require cognitive and creative skills. The

knowledge recipients have to intelligently convert the relevant knowledge to shorten the delivery time, higher customer satisfaction or better productivity.

- To constantly identify new knowledge assets. Knowledge obsoletes itself because today's solution not necessarily relevant to tomorrow's problem. As the nature of competition and customer expectation changes over time, so does the business need. Keeping an updated knowledge base is imperative to maintain a lively knowledge management system.

6.3.4.4 Performance Evaluation

Finally, as the part of a continual process, a performance review on knowledge management project is carried out annually or semi-annually. Analytical techniques to assess returns from intangible investments are in their infancy. This is partly because the impact of the people-related, behavioural issues involved is difficult to quantify (Chong, 2000).

Many metrics and measurements on the effectiveness and efficiency of knowledge management have been introduced by scholars and practitioners. From the simplicity of Tobin's Q, to the Skandia's method that has over hundred indicators, the moderate approach based on balanced scorecard is recommended.

As shown in Figure 6-8, the desirable results that delivered by knowledge management should ideally cover financial, customer, human capital and organizational capital. And based on the Tiwana's adaptation, this measurement method has also included some classification scheme of Skandia's intellectual capital management.

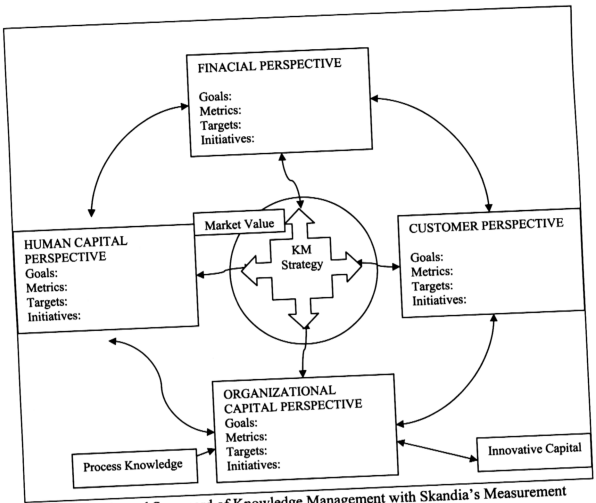


Figure 6-8 Balanced Scorecard of Knowledge Management with Skandia's Measurement
Source: Adapted from Tiwana, 2000

Figure 6-8 shows that KM strategy has to create market value as its foremost objectives. This balanced scorecard covers four areas namely Financial Perspective, Human Capital Perspective, Customer Perspective and Organisational Capital Perspective, to measure the effectiveness of KM programme. Out of the four perspectives, the Financial Perspective is the only one review the past, while the other three mainly stress the important of managing the future. Under each perspective, indicators of Goals, Metrics, Targets and Initiatives are the measurements on reality against promises.

6.4 Future Study

Study on knowledge management on Malaysian business entity, particularly SMEs, could be focused on their success factors to provide some guidelines for other project with the similar capacity.

More importantly, the results delivered by knowledge management are measured among Malaysian companies could be worthwhile to look into. It is widely accepted that it contributes to corporate success. This is because there has been a 'notable absence of compelling evidence that' the promising knowledge management' is actually true. (Kluge *et al.*, 2001)

6.5 Conclusion

This study has shown the general awareness among Malaysian SMEs on knowledge management is satisfactory. Even though only a few companies have started implementing initial knowledge management, the future of this practice is considered optimistic. This is based on that knowledge sharing activities are commonly organised, be it formally or informally, in all companies surveyed.

It is concluded that the hypothesis that mentioned earlier that 'Outstanding Malaysian SMEs are generally could recognize the importance of intellectual capital but only a few will initiate formal knowledge management with the support of the senior management and sufficient technological infrastructure' is to some extents has been tested through this research finding.

The proposed model is an attempt to improve the overall organisation performance with little financial commitment due to SMEs' limited resources.